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(56) Documents cited

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(58) Field of search

E2A

H2C

A4B

Selected US specifications from IPC sub-classes F16B
B65D

(54) A clamp especially for an aerial bundled cable

(57) A clamp for an aerial bundled cable to be installed on walls of buildings and wood poles in particular, which clamp comprises a strap (6), an installation plug (5) and a body portion (1) provided with an installation groove (2) for the cable and a nail passage (3) provided for a fastening nail of the clamp and extending essentially perpendicularly with respect to the axial direction of the cable. In order to enable installation of the clamp to the supporting structure thereof also in such a manner that the installation groove will be vertically positioned, a second nail passage (4) is provided which extends from the bottom of the installation groove (2) of the body portion (1) through said body portion (1) essentially perpendicularly to said first nail passage (3). The second nail passage (4) advantageously extends through the first nail passage (3).

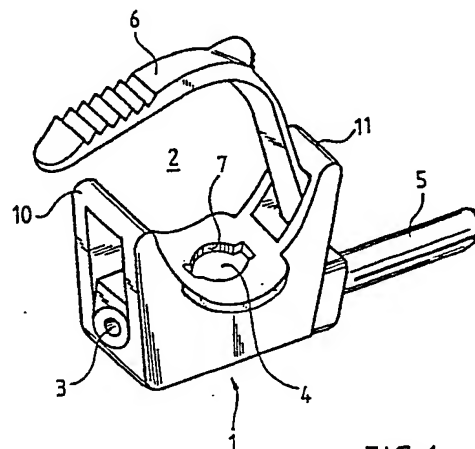


FIG. 1

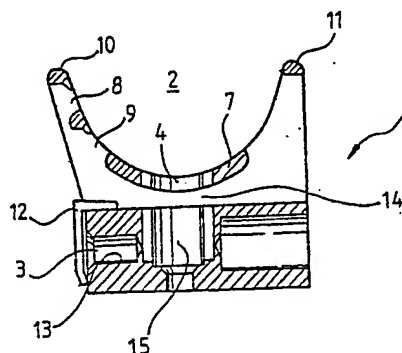


FIG. 2

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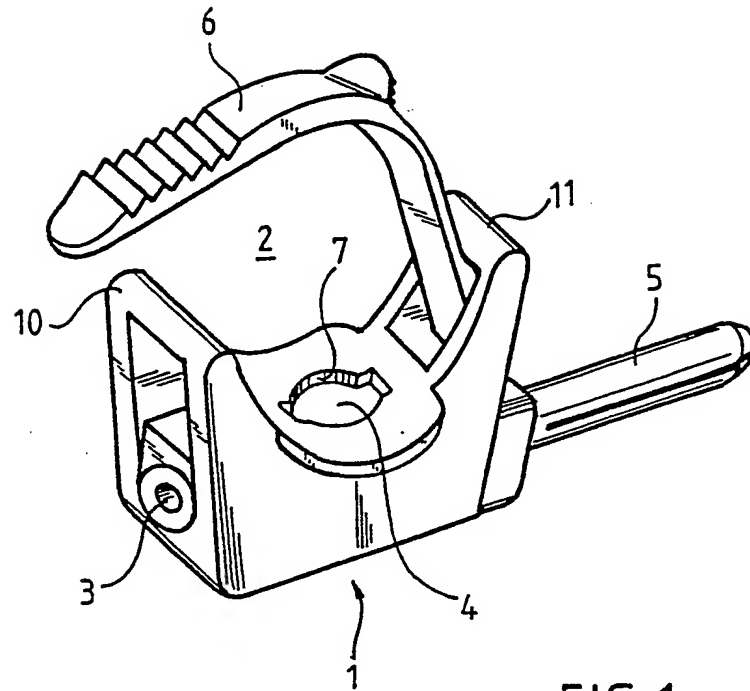


FIG. 1

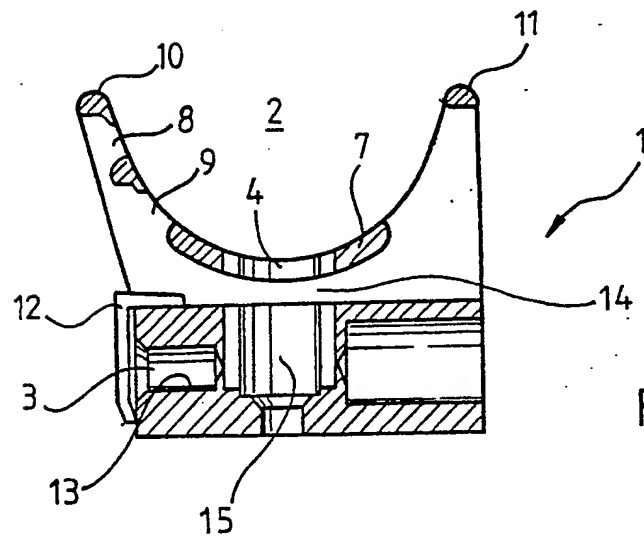


FIG. 2

SPECIFICATION

A clamp especially for an aerial bundled cable

5 The invention relates to a clamp especially for an aerial bundled cable to be installed on walls of buildings or on wood poles in particular, said clamp comprising a body portion provided with an installation groove for the cable, and a nail passage
10 provided for a fastening nail of the clamp and extending essentially perpendicularly with respect to the axial direction of the cable.

Clamps or fastening nails of this type are used for the installation of aerial bundled cables on wall
15 surfaces of buildings or on wood poles when the cable is installed in an essentially horizontal position. Because the nail passage for fastening of the clamp on a supporting structure is in clamps described above positioned essentially
20 perpendicularly with respect to the installation groove of the cable, the nail passage cannot be used for fastening of the clamp if the cable must be installed in an upright position on a wall surface or on the surface of a wood pole. Therefore it is
25 necessary in such cases to use either clamps especially intended for the purpose or clamps of the above type must be provided with special connecting parts by means of which the clamps can be connected to the supporting structure also in such
30 a manner that the installation groove is vertically positioned.

The object of the present invention is to provide a clamp for an aerial bundled cable, which clamp is adapted for use both when the cable is installed in
35 the normal way, i.e. horizontally, and when the cable must be mounted on the installation surface thereof in an upright position. This is effected in the clamp according to the invention by providing said clamp with a second nail passage which extends from the
40 bottom of the installation groove of the body portion through the body portion essentially perpendicularly to said first nail passage. In order to minimize the size of the clamp and the amount of material used for it, it is of advantage that the second nail passage extends
45 through the first nail passage. In order that the head of the installation nail would be positioned at a sufficient distance from the cable when the clamp has been installed in place, it is advantageous that the second nail passage is enlarged at the end
50 thereof adjacent the installation groove of the cable at least in level with that surface of the first nail passage which is away from the installation groove of the cable, whereby the head of the installation nail is positioned in level with said surface when the
55 clamp has been mounted in place.

The clamp according to the invention will be more closely described in the following with reference to the attached drawings, wherein

Figure 1 is a perspective view of a clamp according to the invention provided with an installation plug
60 and a strap,

Figure 2 is a side view of the clamp of *Figure 1* as a partial longitudinal section.

The clamp shown in *Figure 1* comprises a body
65 portion 1, to which an installation plug 5 is mounted,

whereby a nail passage 3 extends through the body portion and the plug. One side of the body portion 1 is trough-like, thus providing an installation groove 2 for the cable. For locking of the cable into the

70 installation groove, the clamp is further provided with a strap 6 which, in the embodiment of *Figure 1*, forms an integral part of the plug 5.

When a clamp of the type shown in *Figure 1* is installed on a wall surface in the usual way, a hole of
75 suitable dimensions is first bored in the wall, the plug 5 being inserted in said hole. Thereafter the body portion 1 is attached to the plug 5 as shown in *Figure 1* and a nail is driven into the nail passage 3 of the clamp, which nail tends to drive apart the halves of the plug 5 when it is thrust thereinto, whereby the clamp is firmly fastened to the supporting structure thereof. Thereafter the cable is positioned in the installation groove 2 thereof to be secured in place by means of the strap 6.

85 If the clamp according to *Figure 1* is used in such a manner that the installation groove will be vertically positioned the body portion is fastened on the supporting structure by means of an installation nail passed through the second nail passage 4. The
90 cross-section of the clamp shown in *Figure 2* illustrates in more detail the structure of the second nail passage 4. It extends from the bottom of the installation groove 2 through said bottom 7 and the first nail passage 3. Said second nail passage 4 is
95 enlarged in a portion 15 adjacent the installation groove 2 in order that the head of the installation nail would be positioned at a sufficient distance from the cable positioned in the installation groove 2 when the clamp has been installed in place. The cable is
100 attached to the body portion installed on its supporting structure by threading a separate strap (not shown) of a commonly known type through a strap channel 14 extending under the bottom 7 of the installation groove 2 parallel to the nail passage 3.
105 Such a strap serves also as a cover for the head of the nail (not shown) driven through the nail passage 4 and as an insulator between the nail head and the cable. Because the head of the installation nail positioned in the second nail passage 4 will be positioned in level with a bottom surface 13, said nail does not, either, prevent passing of the strap through the strap channel 14.

It should be mentioned that the strap 6 shown in *Figure 1* is, when a body portion 1 according to
115 *Figure 2* is used, adjustable between two degrees of tightness by positioning it either in an opening 8 of the installation groove 2 or in an opening 9. If a conventional strap is used in connection with the clamp according to the invention, a cable of a very
120 small cross-sectional area can be fixed in place simply by passing the strap only around the bottom 7 of the installation groove 2. Correspondingly, a cable or a bundle of cables of a fairly large cross-sectional area can be fixed in place by passing the retainer around the bottom and ribs 10 and 11 defining the edges of the installation groove 2.
125 *Figure 2* further illustrates a cover 12 which closes the first nail passage in such a manner that the head of a fastening nail possible mounted therein can be covered from the surroundings thereof.
130

The clamp according to the invention for installation especially of an aerial bundled cable has been described above only by means of one specific embodiment and it is to be understood that it can be modified in various ways without, however, deviating from the scope of protection defined in the attached claims. So the second nail passage could be positioned also at the side of the installation groove 2 in such a manner that it does not extend through the first nail passage 3. However, such a structure would increase consumption of material to some extent, wherefore it could be regarded as less advantageous. Also other previously known alternative structures of particularly the installation groove 2, the retainer 6 and the plug 5 and other related elements thereof can be used with the clamp according to the invention.

CLAIMS

1. A clamp especially for an aerial bundled cable to be installed on walls of buildings or wood poles in particular, said clamp comprising a strap and a body portion provided with an installation groove for the cable, a first nail passage for a fastening nail of the clamp and extending substantially perpendicularly with respect to the axial direction of the cable, and a second nail passage extending from the bottom of the installation groove of the body portion through said body portion substantially perpendicularly to said first nail passage.
2. A clamp according to claim 1, wherein said strap is integral with an installation plug.
3. A clamp according to claim 1, wherein said second nail passage extends through said first nail passage.
4. A clamp according to claim 3, wherein said second nail passage is enlarged at the end thereof adjacent the installation groove of the cable at least level with that surface of the first nail passage which is away from the installation groove of the cable, the head of the installation nail being thus positioned level with said surface when the clamp has been installed in place.
5. A clamp according to claim 4, wherein the strap is separate and serves as a cover and an insulator between a head of a nail driven through the second nail passage and a cable installed in the installation groove.
6. A clamp substantially as described herein with reference to Figure 1 or Figure 2 of the accompanying drawings.